

REMARKS

Claims 1-5, 7-10 and 13-23 are pending in the application. The Examiner, objected to claims 7, 10 and 14 and rejected claims 1-5, 8, 9, 13 and 15-23. The Examiner's objections and rejections are addressed below in substantially the same order as in the office action.

REJECTIONS UNDER 35 USC § 102

The Examiner rejected Claims 1, 2, 4, 9, 13, 17, 19, 20 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 37 U.S.C. 103(a) as obvious over Byrnes et al. (U.S. 6,070,660) also as obvious over Archer (U.S. 5,592,059).

The Prior Art of Record

The Examiner cites Byrnes et al and Archer in the rejections against some of the pending claims. These two references are discussed in detail below.

U.S. Pat. No. 6,070,660; Byrnes, et al

To Applicant's reading, Byrnes et al. discloses control of the fan speed to minimize temperature stratification of air. Control of the fan speed is not in any manner controlled to accelerate reduction of moisture in the air. This is clearly the case since the speed control is used during both cooling cycles and heating cycles. As is commonly known in the art, dehumidification is largely a nonissue during heating cycles. Thus, Byrnes et al does not teach or suggest control of the fan speed to accelerate the removal of moisture from the air. Additionally, the fan speed of Byrnes et al is continuously varied. For convenience, the abstract of Byrnes et al is reproduced below with the relevant sections highlighted:

A forced air heating and/or cooling system utilizing a permanent split capacitor (PSC) or shaded pole AC induction motor and including an actuator for energizing a source of heating and/or cooling effect may be controlled by a controller circuit which is operable to continuously vary the speed of the fan motor during a start-up phase and a shut-down phase of the heating and/or cooling cycle. The controller circuit includes terminals for connection to the source of electrical energy for the heating and/or cooling system and for connection to the system controls without altering the control function or circuitry thereof. The controller circuit includes elements for operating the fan motor to continuously vary its speed on start-up over a first predetermined time period and to continuously vary its

speed down to a predetermined minimum on shutdown of the heating or cooling equipment over a second predetermined time period to minimize temperature stratification of air in the space being cooled or heated and to maximize capture of residual heat/cooling effect of the system. Another embodiment of the controller circuit includes temperature sensors which are operable to control start-up and shutdown of the fan motor over continuously variable speed operating cycles in response to sensed temperature of the air being circulated by the fan.

U.S. Pat. No. 5,592,059. Archer

To Applicant's reading, Archer discloses arrangements for electronic control of the fan speed. Control of the fan speed is not in any manner controlled to accelerate reduction of moisture in the air. In fact, Archer expressly connects fan motor speed to the temperature of the circulated air. Moreover, like Byrnes et al, the speed control provide continuously variable fan speeds during both cooling cycles and heating cycles. As is commonly known in the art, dehumidification is largely a non-issue during heating cycles. Thus, Archer does not teach or suggest control of the fan speed to accelerate the removal of moisture from the air. For convenience, the abstract of Archer is reproduced below with the relevant sections highlighted:

A system for driving a blower of a heating, ventilating, and/or air conditioning (HVAC) system. The blower discharges heated or cooled air to a space for conditioning the air in the space by changing its temperature. A motor drives the blower at a speed or torque defined by a motor control signal thereby to control air flow rate of the HVAC system. The system includes a temperature sensor generating a temperature signal representative of the temperature of the air discharged to the space by the blower. In response to the temperature signal, a control circuit generates the motor control signal to cause the motor to operate at a minimum speed or torque until the temperature of the discharged air as represented by the temperature signal reaches a reference temperature. After the temperature of the discharged air reaches the reference temperature, the control circuit generates the motor control signal to control the motor speed or torque as a function of the difference between the temperature of the discharged air and the reference temperature whereby the air flow rate of the HVAC system is increased as the temperature difference increases.

Claims 1, 13 and 19

With respect to amended independent claims 1, 13 and 19, neither Byrnes et al nor Archer disclose a speed control adapted to accelerate the removal of moisture within the air being conditioned. Specifically, neither of these references controls fan speed to accelerate

the removal of moisture from the air being conditioned. Thus, these references do not anticipate the pending claims. Further, as noted above, these references are directed to either generic control over an HVAC system (Archer) or reduction in mixing of stratified air (Bymes et al.). Applicant found no hint or suggestion for modifying the disclosed systems to accelerate reduction of moisture in the air being conditioned. Thus, the prior art of record does not obviate the pending claims. Accordingly, Applicant respectfully submits that amended claims 1, 13 and 19 are in condition for allowance and such action is requested.

Applicant observes that recitations directed to moisture control were present in the originally filed claims. For clarity, these recitations have been moved from the preamble to the body of the independent claims. Accordingly, allowance for the pending claims is not being based on new grounds.

Claims 3, 16 and 20

With respect to amended dependent claims 3, 16 and 20, neither Bymes et al nor Archer disclose a speed control wherein the initial slower speed is substantially fixed. As noted above, both of the vary the fan speed. Thus, these references do not anticipate claims 3, 16 and 20. Further, Applicant found no hint or suggestion for utilizing a fixed first slower speed. Thus, the prior art of record does not obviate these claims. Accordingly, Applicant respectfully submits that amended claims 3, 16 and 20 are in condition for allowance and such action is requested.

Claims 4, 5, 7-10, 14, 15, 17-19 and 21-23


With respect to amended dependent claims 4, 5, 7-10, 14, 15, 17-19 and 21-23, these claims depend from independent claims believed to be in condition for allowance and are believed to be allowable on at least those grounds.

CONCLUSION

For all the foregoing reasons, Applicant submits that the application is in a condition for allowance. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 13-0010 (CUR-1001-US).

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that this correspondence, along with any papers referred to as being attached or enclosed, is being transmitted by facsimile to the attention of Commissioner for Patents, facsimile number 571-273-8300 on this 4 day of August 2005.


Margaret Pruitt